

**2015
JOHNSON COUNTY
SOLID WASTE
DISTRICT
NEEDS
ASSESSMENT**



**Prepared by
First Tennessee Development District
May 2015**

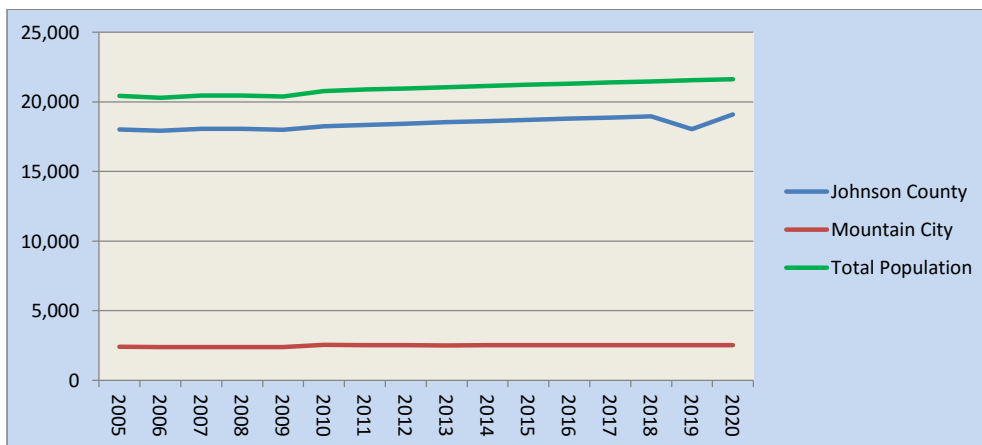
INTRODUCTION

The Solid Waste Management Act of 1991 requires Tennessee local governments to prepare and maintain a comprehensive plan for managing their solid waste through modern, integrated, efficient systems. To assure that such planning is carried out on a solid foundation of relevant and objective knowledge of local conditions, the Act requires that the Development District staff coordinate, conduct and maintain an assessment of the solid waste needs for each municipal solid waste planning region. This assessment shall be revised every five years [T.C.A. 68-211-811].

Item 1-Demographic Information & Projections

Provide a table and chart of the region's population during the past ten (10) years with a projection for the next five (5) years. Provide a breakdown by sub- table and sub-chart, or some similar method to detail county and municipality populations. Considering the trends, discuss the affect on the solid waste infrastructure needs over the next five (5) years.

	Johnson County	Mountain City	Total Population
2005	18,031	2,398	20,429
2006	17,922	2,375	20,297
2007	18,074	2,391	20,465
2008	18,063	2,385	20,448
2009	18,006	2,377	20,383
2010	18,244	2,536	20,780
2011	18,351	2,532	20,883
2012	18,445	2,519	20,964
2013	18,542	2,504	21,046
2014	18,628	2,527	21,155
2015	18,716	2,524	21,240
2016	18,793	2,521	21,314
2017	18,876	2,519	21,395
2018	18,952	2,519	21,471
2019	18,032	2,522	21,554
2020	19,112	2,521	21,633



Population projections for Johnson County, including the Town of Mountain City, indicate that any growth in population will be extremely slight over the next 5 years. Historically this has been the trend in Johnson County since 2005. Population was expected to increase faster than projections in the 2008-2009 timeframe due to ~~due to~~ significant residential development projects started or rumored to start during this period. However, with the downturn in the economy during this time, many of these developments never occurred or were halted in midstream. The expected influx of people to the Mountain County never occurred. We do not expect this type of population growth due to development activities to occur in the foreseeable future as well.

Comment [AB1]: Mountainous county? Mountain City? Johnson County?

~~Population growth e~~Estimates ~~of population~~ indicate that the overall trend for growth in Mountain City and Johnson County ~~rural~~ (residents ~~living outside Mountain City~~) indicate the overall trend to will be relatively flat for the next five years. However, like any projection of this nature, changes can occur in population growth due to factors not yet identified such as industrial expansions, residential developments, introduction of new industries, etc. Taking into account all of the factors that impact population growth ~~or decline~~, Johnson County ~~appears to will~~ be experiencing flat population growth over the next several years. This would ~~indicate~~, with confidence, indicate that the solid waste infrastructure in place for residential collection of wastes certainly appears to be more than adequate to meet the demands of the population over the next 5 years. This may not have been true if the residential boom that appeared to be poised in 2008 had occurred. Johnson County operates a single convenience center/transfer station facility while the Town of Mountain City offers door-to-door collection for residents inside the ~~town~~ limits. Private haulers also provide limited door-to-door collection in rural areas of? the County. All of which will not be strained over the next 5 years due to population growth.

Comment [AB2]: Or residents in unincorporated areas of the county

Unrelated to population growth, ~~we do feel that~~ a discussion does need to take place concerning additional convenience center site(s) to provide more convenient collection opportunities for residents throughout the County. Although the current single convenience center collection program has few critics, ~~in in~~ this relatively large mountainous County with some geographic isolation, an additional convenience center or more would greatly increase the convenience for residents and may result in fewer illegal roadside dumps or open burning of wastes.

Item 2-Analysis of Economic Activity within the Region

Provide a table and chart showing the region's economic profile for the county and its municipalities for the last ten (10) years with a projection for the next five (5) years.

This can be accomplished by using the following economic indicators:

- Taxable sales, property tax generation, and per capita income
- Evaluation by break down of each economic sector
- County or municipal budgeting information
- Other commonly accepted economic indicators

Table 2-1 Name

Year	Labor Force	Employed	Unemployed	Unemployment Rate	Per Capita Income	Retail Sales
2005	6,940	6,370	570	8.21%	\$18,601	\$85,832,463
2006	7,338	6,851	487	6.63%	\$19,841	\$92,056,116
2007	7,415	6,990	425	5.73%	\$21,581	\$99,003,510

Comment [AB3]: Please fit individual tables on one page so that they are not disrupted by page breaks.

2008	7,278	6,648	630	8.66%	\$22,819	\$102,698,150
2009	7,460	6,499	961	12.88%	\$23,472	\$89,700,600
2010	7,450	6,441	1,009	13.55%	\$24,147	\$91,354,639
2011	7,541	6,602	939	12.45%	\$24,930	\$93,452,676
2012	7,376	6,618	758	10.27%	\$26,208	\$94,967,949
2013	7,365	6,638	727	9.87%	\$27,077	\$94,212,799
2014	7,076	6,540	536	7.58%	\$25,167	\$96,046,539
2015	7,362	6,659	566	7.69%	\$25,506	\$93,932,544
2016	7,344	6,641	703	9.57%	\$25,778	\$94,742,552
2017	7,305	6,602	657	9.00%	\$25,947	\$95,011,196
2018	7,290	6,587	637	8.74%	\$25,895	\$94,611,964
2019	7,275	6,655	620	8.52%	\$25,658	\$93,803,346
2020	7,315	6,679	636	8.70%	\$25,757	\$94,213,620

Source: U.S. Census Bureau, East Tennessee State University Department of Economics and finance.
Some projections done by FTDD staff.

The following charts show graphic representation of the data contained in the previous table. Data projections show slight fluctuations in retail sales over the next 5 years, but overall very little change, which has been the historical trend in Johnson County since 2005. With the exception of 2008, retail sales fluctuate only a few million dollars year to year. Per capita income projections also show the same stagnant trend as seen in retail sales. As a rule, Retail sales and per capita income are often used to judge the health of a local economy. Furthermore, sales activity is a good predictor of waste generation. Based on this assumption Given that retail sales and per capita income is expected to stay stagnant with little to any growth, Johnson County is not expected to see a significant increase in waste generation over the next 5 years and most likely further into the future longer. Unemployment rates are projected to be remain between 8.5% and 9.5% for the next 5 years. This again points to very little economic growth over the next several years. As mentioned earlier, all of these factors combined would indicate that economic indicators showing any prediction of an increase in waste generation over the next 5 years, do not exist. In fact, most of the These economic signs point to the same economic growth in Johnson County that has existed for the last several years. Nothing indicates the existing solid waste management system is incapable of handling any increase in waste generation. Expansion to the system is needed to provide more convenient service for residents, but will not be required due to economic factors.

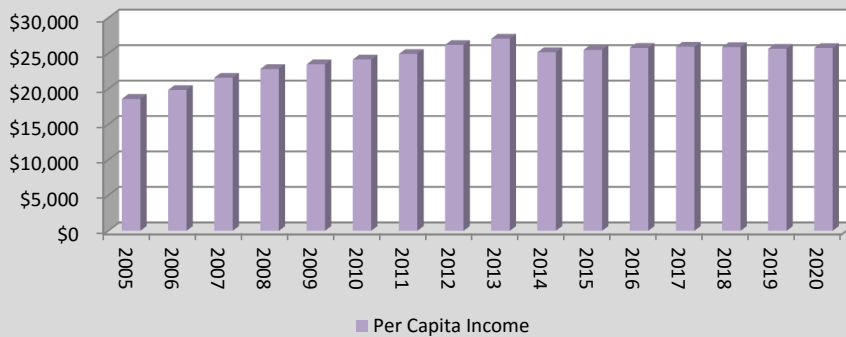
Comment [AB4]: '05 to '09 looks like it was pretty volatile. Very noticeable growth rate and then the sharp drop from 2008 to 2009.

Comment [AB5]: Don't have to push the prediction out past 5 years but you can if you want.

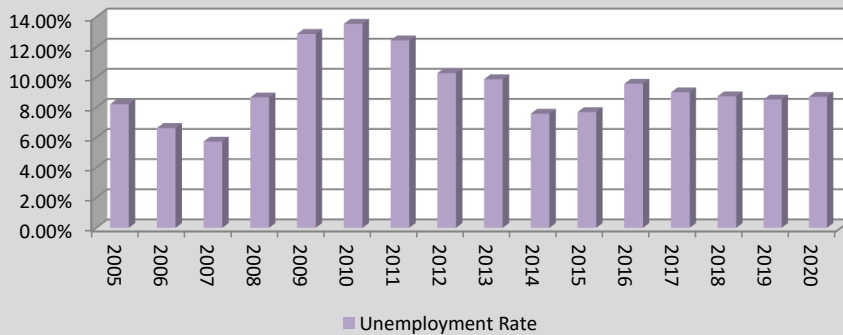
Retail Sales



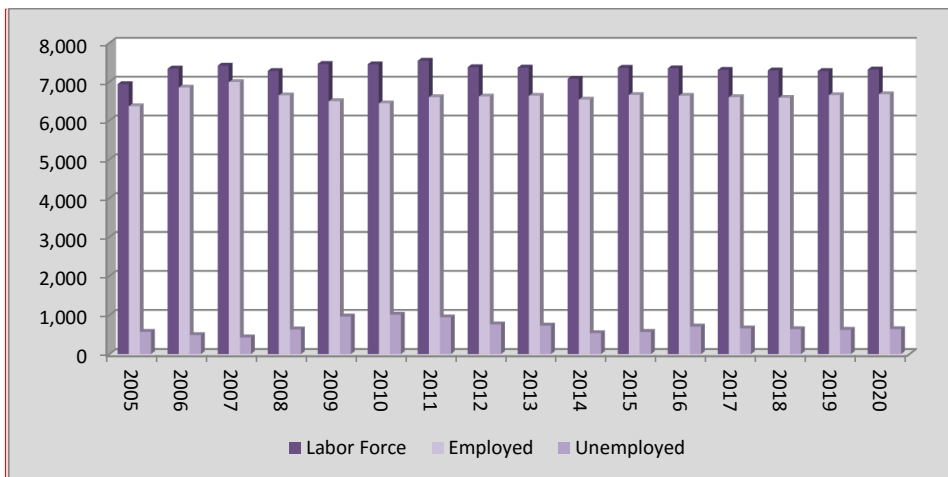
Per Capita Income



Unemployment Rate



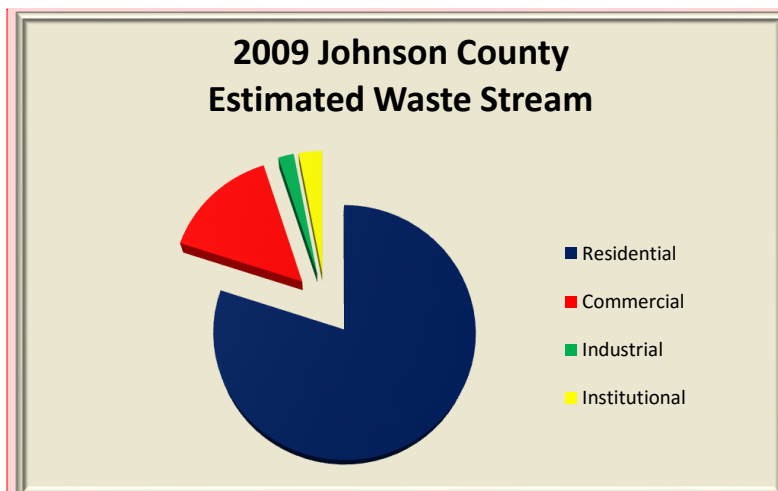
Comment [AB6]: For graphs like this showing change over time for only one subject, I would use a line graph. I would also number them, and then you can refer to them by their number in the discussion.



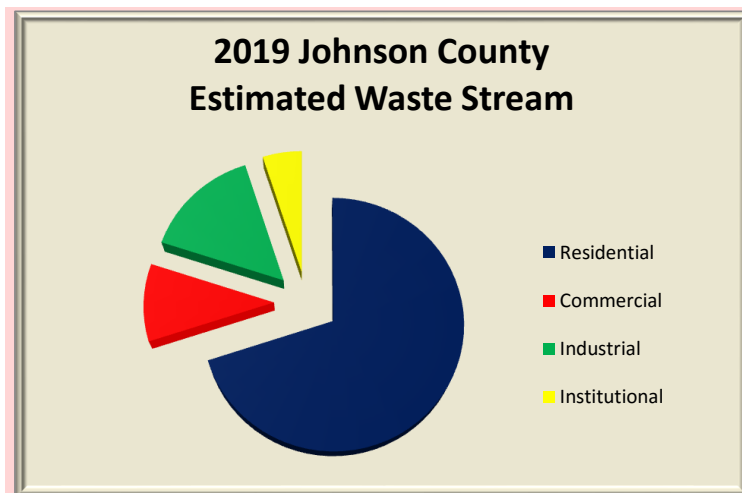
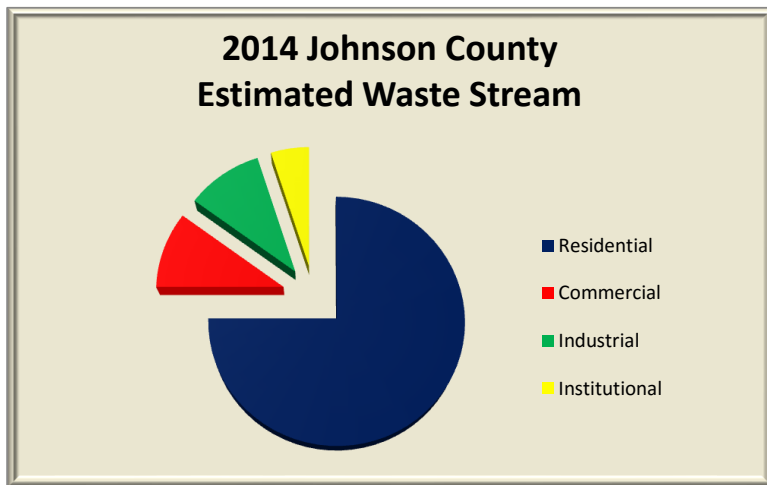
Comment [AB7]: I would use different colors for employed and unemployed (red and blue for example) and wouldn't have total labor force so that the graph wouldn't be so crowded.

Item 3-Characterization of the Solid Waste Stream

Elaborate on the region's solid waste stream. Compare the current waste stream with trend anticipated over the next five (5) years, and discuss how this new total will be handled. Include in this discussion how problem wastes like waste tires, used oil, latex paint, electronics and other problem wastes are currently handled and are projected to be handled in the next five (5) years. What other waste types generated in this region require special attention? Discuss disposal options and management of these waste streams as well as how these waste streams will be handled in the future. Include in this discussion how commercial and industrial wastes are managed. Also, provide an analysis of any wastes entering or leaving the region, noting the source and amounts of such wastes.



Comment [AB8]: Can you show % on the graphs?



Comment [AB9]: This looks like the industrial sector has greatly increased its share since '09 and will increase further by '19. And that commercial share has decreased.

For many years, the majority of waste generated in Johnson County ~~is has been~~ comprised of residential materials. Much of the industry presence in Johnson County has declined for the last several years and ~~consists only primarily of just~~ a few industrial operations remain. Waste stream projections, based on conversations with local officials show that residential materials make up about 80% of the waste stream in 2009, 75% of the waste stream in 2014 and approximately 70% of the waste stream is expected to be residential in 2019. Commercial and industrial wastes comprise a majority of the remaining waste stream. Given all of the factors that influence waste generation such as economic activity, population trends and waste stream characteristics, Johnson County's current system for handling waste is more than adequate to effectively handle the future projected waste stream.

As seen from the data, Johnson County's demographics, economic characteristics and waste stream have changed very little in the past 5-10 years. We do not expect this trend to change over the next 5 years and probably longer. The most pressing issue the current solid waste management system has is not related to volume management. The most significant issue appears to be providing more convenient collection options for residents. An additional convenience center or two, will provide residents in the most rural sections of the County with proper disposal options and address any need for additional collection services as a result of unexpected economic growth, population growth or drastic changes in the waste stream.

Johnson County accepts commercial or industrial waste at the Transfer Station but does not provide collection services on site. Most of the industrial or commercial collection is conducted by the private sector and is transported to the Transfer Station. Due to the expected trends in population growth, economic activity and the composition of the County's waste stream over the next 5 years, Johnson County appears to be positioned well to handle the MSW stream for the foreseeable future.

Comment [AB10]: Not sure what you mean. You mean they won't go pick it up at the commercial or industrial site?

The Johnson County Transfer Station serves as the "hub" for solid waste and special waste collection programs. Tires, batteries, used oil and antifreeze are all collected at the Transfer Station. Currently, the County does not collect/manage electronics or paint. Efforts have been made in the past to develop a program to collect electronics and paint, but space and storage limitations at the Transfer Station have prevented this from happening. As a result of this, Johnson County is not eligible to participate in the State's household hazardous waste collection program. The following table illustrates the County's methods for managing special wastes.

<u>Special Waste</u>	<u>Collection Process</u>	<u>End Use</u>
Waste Tires	Collected at Johnson County Transfer Station	Liberty Tire, Concord, NC
Lead Acid Batteries	Collected at Johnson County Transfer Station	Omnisource Recycling
Used Oil	Collected at Johnson County Transfer Station	Spectrum Recycling
Antifreeze	Collected at Johnson County Transfer Station	Re-used
Electronics	Do not manage	
Latex Paint	Do not manage	

Future collection, management or marketing plans for any of these special wastes are not expected to change in the near future. However, the County may chose alternate end use options based on market prices for any of these commodities. In early 2015, Johnson County changed Class I disposal locations from Iris Glen Environmental Center in Johnson City and began disposing of Class I materials with the (City of?) Bristol, Virginia Landfill. All of the waste collected by Johnson County and Mountain City is disposed of in this facility via the Johnson County Transfer Station. In 2014 a small amount of waste was disposed in the Carter's Valley Landfill in Hawkins County and the Ecosafe Landfill in Sullivan County from private haulers operating in Johnson County. From time to time a very small amount of waste may enter the Johnson County Transfer Station from outside the region or State that is transported to the facility from private haulers operating over County or State lines.



Future used oil and batteries collection site.



Waste tire collection site.

Item 4-Solid Waste Collection System

Provide a detailed description of the waste collection system in the county and each municipality, including a narrative of the life cycle of solid waste from the moment it becomes waste (loses value) until it ceases to be a waste by becoming a useful product, residual landfill material or an emission to air or water. Label all major steps in this

cycle noting all locations where wastes are collected, stored or processed, along with the name of operators and transporters for these sites.

There is one municipality in Johnson County and several small **unincorporated** communities ~~that are not incorporated~~. The Town of Mountain City, the only incorporated community in Johnson County, is home to about 13% of the total population of the County. Mountain City operates a door-to-door solid waste collection program for residents in the Town limits. Collection services for the remainder of the County's population is provided through a staffed transfer station that also serves as the County's **only required convenience center**. There are a few private haulers in the County that provide door-to-door collection for residents. Some of these private haulers haul to the Johnson County Transfer Station while others haul directly to a Class I disposal facility outside the County. Mountain City does not provide a public sponsored recycling program for residents, however all residents in Johnson County are permitted to use the County's recycling collection services. Johnson County provides one **drop-off site for collecting paper, cardboard and plastics**. This is located inside the limits of Mountain City but is funded and operated by Johnson County Solid Waste. Constructed in 2007, this facility replaced a mobile collection system used by Johnson County for several years. Metals and special wastes are collected at the Johnson County Transfer Station.

Comment [AB11]: Is having the CCC located at the same location as the TS a potential health and safety hazard?

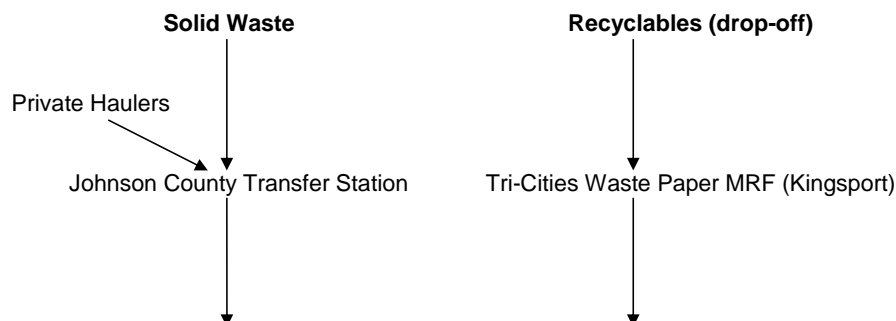
Comment [AB12]: Do you have a picture of this?

For several years, Johnson county officials have considered establishing a paper, cardboard and plastics collection point at the Transfer Station, but have been unable to secure grant funds to purchase collection equipment. An additional recycling collection site(s) is needed in Johnson County to provide more convenient recycling options for the 87% of residents that do not live in the Mountain City limits. **At no point during the life cycle of wastes in Johnson County does the material become a useful product.** All solid waste generated, collected and disposed from Johnson County is placed in a Class I landfill.

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The following flow diagrams show the flow of solid waste and recyclables in the Region from initial collection points to eventual end-points.

Johnson County



Bristol, Virginia Landfill

End Use Markets

Mountain City

Solid Waste

Comment [AB13]: Brought in by the residents themselves?

Johnson County Transfer Station

Bristol, Virginia Landfill

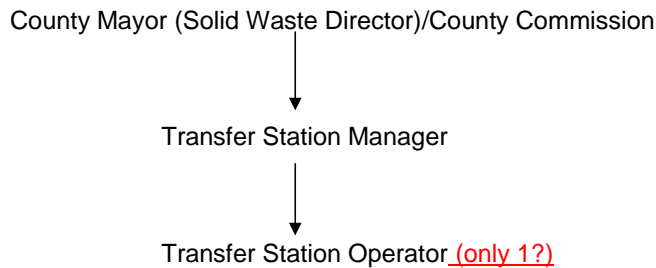


Johnson County Transfer Station.

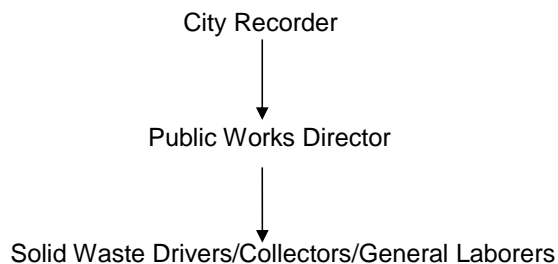
Item 5-Analysis of Existing or Potential Solid Waste Flows within the Region and Between Adjacent Regions

Provide organizational charts of each county and municipality's solid waste program and staff arrangement. Identify needed positions, facilities, and equipment that a fully integrated solid waste system would have to provide at a full level of service. Provide a page-size, scaled county map indicating the location of all solid waste facilities, including convenience centers, transfer stations, recycling centers, waste tire drop-off sites, used oil collection sites, paint recycling centers, all landfills, etc. Identify any short comings in service and note what might be needed to fill this need.

Johnson County
Solid Waste Program Organizational Chart



Mountain City
Solid Waste Program Organizational Chart



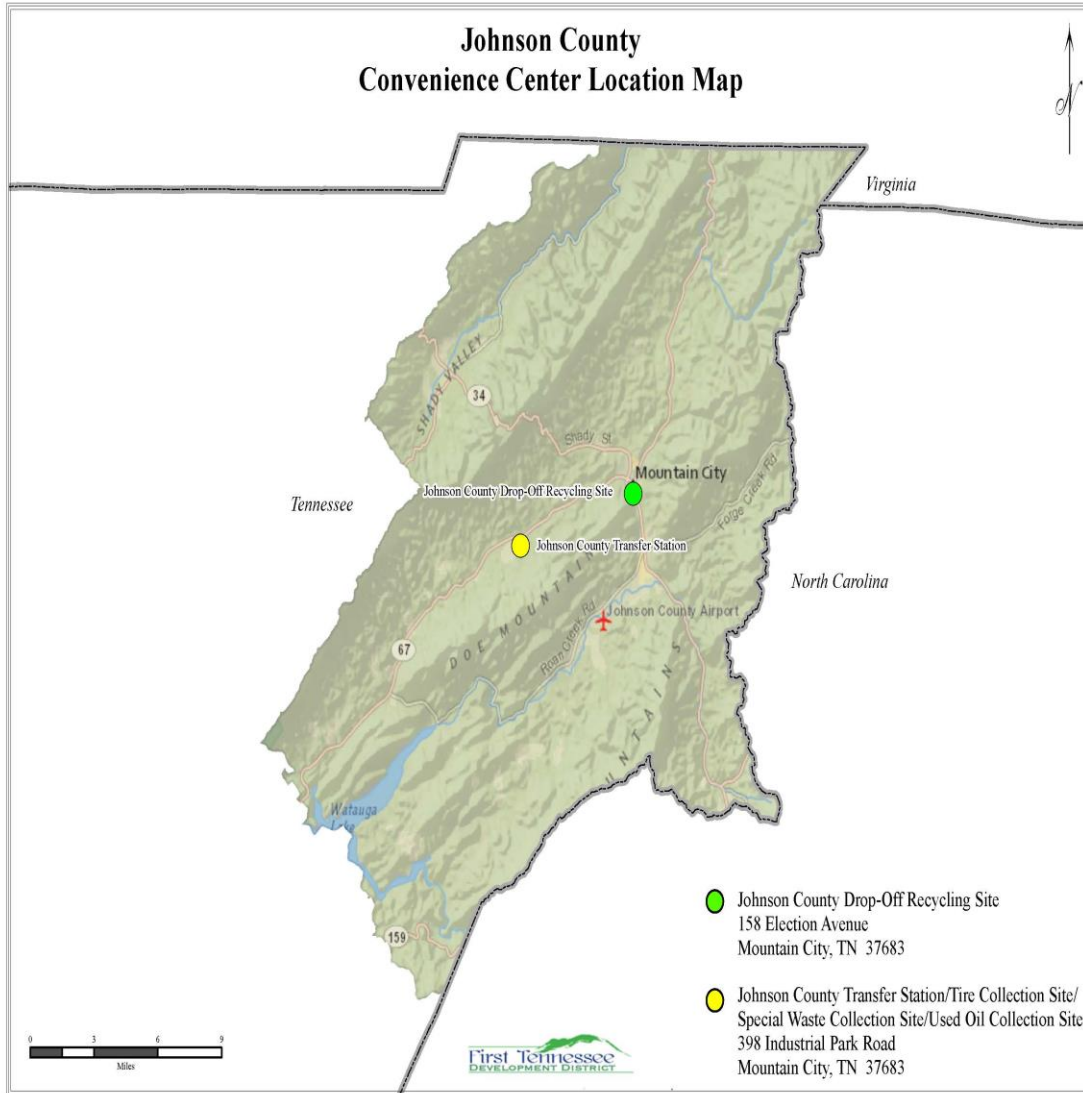
There are currently no identified needs in staffing or facilities to provide a full level of service. Johnson County and Mountain City are currently delivering a level of service that is meeting the needs of their respected communities. Replacing aged and outdated equipment will continue to be a need in both of the entities over the next 5 years. However, none is needed to increase the level of service. A map showing all of the solid waste management facilities in the Region is attached. Two short-comings in the County's solid waste management system are the need of to implement a continuous program for accepting and recycling e-waste and a program to accept latex paint to remove it from the HHW waste stream. This will allow the County to once again participate in the State's HHW collection program. Funding to implement a latex paint program is largest obstacle at this time facing Johnson County.

Comment [AB14]: Except for the recommended SW director.

As previously mentioned, Johnson County needs to investigate the possibility of adding at least one additional drop-off collection site for collecting solid wastes. Although not required by law, the additional site will provide expanded collection services for residents in areas of the County that are geographically isolated or do not have sufficient access to private curbside collectors. Furthermore, the Town of Mountain City needs to become involved in recycling and waste reduction efforts to compliment the programs offered by the County. Specific services can be determined in the future, but some examples may include recycling drop-off sites at public facilities i.e. City Hall, EMS, schools, shopping centers, etc. Mountain City's "sanctioned" participation in recycling will bolster the County's efforts to reaching the 25% waste reduction goal. Lastly, Johnson County needs to appoint an "official" solid waste director to oversee all aspects of the solid waste management system. Staffing changes have led to this role being filled by the Mayor or other staff with other responsibilities in the organization. A full or part time director would enhance Johnson County's ability to manage the program, access grant funds, grow the program, and develop public education initiatives, etc.

Comment [AB15]: If it is solid waste, it would have to be a manned convenience center.

Johnson County Convenience Center Location Map



Item 6-Analyze Attitude of Region Toward Waste Management in General and Specify Needed Changes and/or Educational Measures

Describe current attitudes of the region and its citizens towards recycling, waste diversion, and waste disposal in general. Where recycling is provided, discuss participation within the region. Indicate current and ongoing education measures to curb apathy or negative attitude towards waste reduction. Are additional measures needed to change citizen's behaviors? If so, what specific behaviors need to be targeted and by what means.

Attitudes of the citizens of Johnson County toward recycling and waste reduction efforts haven't changed significantly in the past several years and are very similar to the feelings of citizens in most small rural counties across the State. While there are some residents that fully support and participate in the drop-off recycling program, most residents are still reluctant to view recycling and waste reduction as an option. There is a constant battle to bring recycling and waste reduction programs to the priority level of other county services and expenditures.

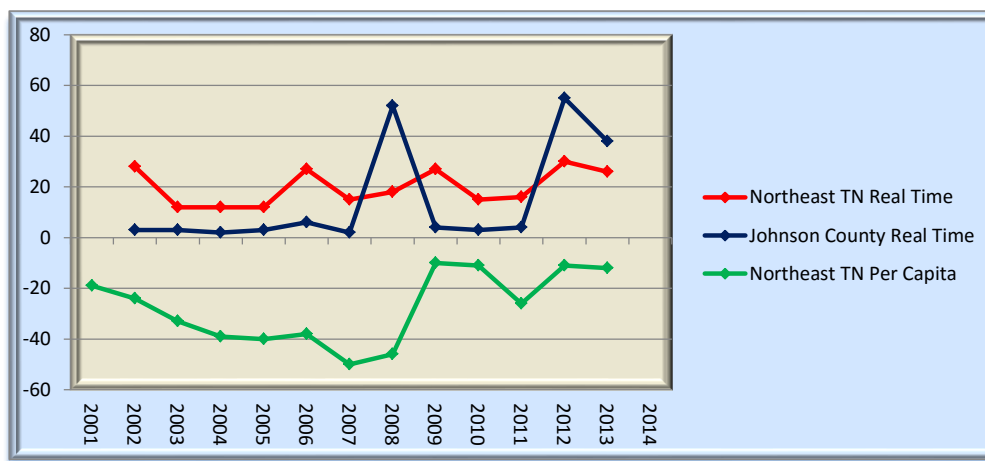
The small but constant influx of new residents from ~~midwestern~~Midwestern and Northeastern states in recent years, County officials have seen an increase in the level of interest from citizens which in itself poses problems for this solid waste/recycling management system with very little funds to provide the level of services that some residents want. While this has probably led to an increase in participation, there still seems to be high level of apathy among most residents pertaining to waste reduction and recycling, although the County has provided ample opportunity for all residents.

There are no current educational measures in place to change the negative attitude many have towards recycling. The lack of a defined education program or and staff dedicated to providing public education, is most likely the greatest factor in the public's apathy toward recycling or waste reduction. The general feeling is that most residents approve of recycling as an option to waste disposal but are not motivated to participate consistently. There is a need for an increase in educational awareness programs to change citizen's behaviors; however, Johnson County does not have the funds to implement a program of this nature at this time. Much of the attention is focused on litter control and illegal dumping activities. If measures could be implemented, a program designed to show the public the environmental and financial benefits to the community of recycling and waste reduction programs.

Johnson County continues to struggle with the same question that most small underfunded programs do. Are recycling and waste reduction efforts more important than funding schools, emergency services, road maintenance, etc.? If recycling ever becomes a higher priority in this and other Counties, public attitude toward waste management will most certainly improve.

Item 7-Evaluation of the Waste Reduction Systems for Counties & Municipalities in Region

The Solid Waste Management Act of 1991 requires all regions to reduce the amount of waste going into Class I landfills by 25%. Amendments to the Act allow for consideration of economic growth, and a “qualitative” method in which the reduction rate is compared on a yearly basis with the amount of Class I disposal. Provide a table showing the reduction rate by each of these goal calculation methodologies. Discuss how the region made the goal by each methodology, or why it did not. If the Region did not meet the 25% waste reduction goal, what steps or infrastructure improvements should be taken to attain the goal, and to sustain this goal into the future.



	Northeast TN Region Real Time	Johnson County Real Time	Northeast TN Region Per Capita
2001	28%	3%	-19%
2002	12%	3%	-24%
2003	12%	2%	-33%
2004	12%	3%	-40%
2005	27%	6%	-38%
2006	15%	2%	-50%
2007	18%	52%	-46%
2008	27%	4%	-10%
2009	15%	3%	-11%
2010	16%	4%	-26%
2011	30%	55%	-11%
2012	26%	38%	-12%
2013	Not Available	Not Available	Not Available
2014	Not Available	Not Available	Not Available

Johnson County individually has met the 25% waste reduction goal using either the “real time” or per capita calculation method 3 times since 2001. The County achieved the goal in 2008, 2012 and 2013. 2014 data was not available at the time of this report. Johnson County is also a member of the Northeast Tennessee Solid Waste Planning Region, which consists of Carter, Johnson, Unicoi and Washington Counties. The 4 County Region has been successful in meeting the goal in 2002, 2006, 2009, 2012 and 2013 using the “real time” calculation method. Johnson County’s failure to meet the 25% goal in a majority of the years measured, is primarily due to the lack of recycling and waste reduction data from private entities such as businesses and industries. In the years that Johnson County met the Goal, there was significantly more commercial and industrial recycling data to include than in years the County did not meet the Goal. Historically, across the State, Region’s that have a high participation rate from businesses and industries in reporting recycling data, typically achieve >25% waste reduction rate using the “real time” calculation method. A direct correlation can be made between the County’s success rate in achieving the Goal and the participation rate of private companies. Johnson County along with other members of the Northeast Tennessee Region have been implementing a business and industry waste reduction and recycling reporting program through the First Tennessee Development District the past few years. This is voluntary program started by the Development District in 2001-2002. Unfortunately, if participation is low, the percentage of waste reduction is also low.

One of the most important infrastructure improvements that needs to be made in the County is that recycling needs to become a part of the Mountain City solid waste management system as well. While realizing the prohibitive costs of establishing a program, it is important that the only municipality in the County provide a more comprehensive recycling program than the drop-off site offered by Johnson County. A continuing trend in this County is that out-of-state residents, primarily retirees, moving to Mountain City and Johnson County have historically expected more waste reduction and recycling opportunities than currently exist.

Additional recycling program components remain the most important infrastructure need in Johnson County to reach the 25% waste reduction goal. Other waste reduction options for Johnson County to implement such as construction/demolition material separation/diversion or source reduction programs, are not feasible to implement in this small rural county. Recycling has been and will continue to be the only feasible option for Johnson County to achieve the 25% waste reduction goal. The “real time” or “recycling rate” calculation is the only method that will ever allow Johnson County to demonstrate success in complying with the State’s 25% waste reduction goal. The “per capita” calculation method toward is virtually impossible to attain due to skewed base year figures and other factors related to economic growth, etc.

Item 8-Collection/Disposal Capacity and Projected Life of Solid Waste Sites

(a) Using the example shown below, provide a chart indicating current collection and disposal capacity by facility site and the maximum capacity the current infrastructure can handle at maximum through put. Provide this for both Class I and Class III/IV disposal and recycled materials. Identify and discuss any potential shortfalls in materials management capacity whether these are at the collection or processor level.

Site Name(s)	Current Capacity	Maximum Capacity	Projected Life of Facility
Johnson County Transfer Station	600-800 tons/month	1,200 – 1,600 tons/month	25 Years
Total:	600-800 tons/month	1,200 – 1,600 tons/month	

(b) Provide a chart or other graphical representation showing service area coverage by public and private waste collectors within the county and municipalities. Include provider's name, area of service, population served by provider, frequency of collection, yearly tons collected, and the type of service provided.

Provider of Service	Service Area	Population Total Under This Service	Frequency of Service (Weekly, Bi-weekly, on call, etc.)	Annual Tonnage Capacity	Type Service (Curbside, Convenience Center, Green Box)
Johnson County	County-Wide	18,716	During open hours	19,200	Transfer Station/ Drop-off
Mountain City	Town Limits	2,524	Weekly	N/A	Curbside

There appears to be no shortfalls in the ability of Johnson County to manage the current waste stream or the projected waste stream over the next 5 years. The design of the County's transfer station is such that significantly more waste than the current 40 tons/day could be managed at this facility. Additional tonnage would only increase the number of trips to the County's Class I disposal site in Virginia which is currently done by a private hauling company contracted by the County.

There are no Class IV landfills or active Class I landfills in Johnson County. The old Johnson County landfill closed many years ago and is currently in post-closure monitoring. The nearest Class IV landfill to Johnson County is located in Carter County and is available to Johnson County residents for C/D material disposal.

Item 9-Unmet Financial Needs and Cost Summary

Complete the following chart and discuss unmet solid waste financial needs to maintain current level of service. Provide a cost summary for current year expenditures and projected increased costs for unmet needs.

EXPENDITURES			
Description	Present Need \$/year	Unmet Needs \$/year	Total Needs (Present + Unmet) \$/year
Salary and Benefits	\$117,420		\$117,420
Transportation/hauling			
Collection and Disposal Systems	\$411,206		\$411,206
Equipment		\$98,000	\$98,000
Sites	\$1,000		\$1,000
Convenience Center			
Transfer Station		\$40,000	\$40,000
Tire Recycling Center			
MRF			
Landfills			
Site			
Operation			
Closure			
Post Closure Care			
Administration (supplies, communication costs, etc.)	\$500		
Education			
Public			
Capital Projects			
REVENUE			
Host agreement fee			
Tipping fees			\$430,000
Property taxes			\$85,000
Sales tax			
Surcharges			
Disposal Fees			
Collection charges			
Industrial or Commercial charges			
Residential charges			
Convenience Centers charges			
Transfer Station charges			
Sale of Recyclables			\$7,000
Fund Balance Transfer			
Other sources: (Grants, bonds, interest, sales, etc.)			\$7,000

Item 10-Compare Revenue Sources for the Region's Current Solid Waste Programs with Projected Future Demands. Identify Any Potential Shortfalls in that Capacity

Identify all current revenue sources by county and municipality that are used for materials and solid waste management. Project future revenue needs from these categories and discuss how these needs will be met.

Locality	Revenue Source
Johnson County	Property Tax Other Taxes Tipping Fees Sale of Materials
Mountain City	Property Tax Collection Fees

Future Solid Waste Management Needs

Community	Item	Estimated Cost	Potential Revenue Sources
Johnson County	Skid Steer Loader	\$35,000	Tipping Fees, Property Taxes, Grants
Johnson County	General Purpose Truck	\$20,000	Tipping Fees, Property Taxes, Grants
Johnson County	Materials Storage Building	\$40,000	Tipping Fees, Property Taxes, Grants
Johnson County	Glass Crusher	\$18,000	Tipping Fees, Property Taxes, Grants
Johnson County	Spotter Truck	\$25,000	Tipping Fees, Property Taxes, Grants

While residential property taxes are a major part of funding all solid waste programs in the County, Johnson County will rely heavily on grant funding from the State to make any major equipment or facility upgrades listed in the Future Solid Waste Management Needs table. Approximately \$138,000 of solid waste management needs have been identified by the County in the 2014 Annual Solid Waste Progress Report. Without grants for solid waste equipment and or significant construction projects, Johnson County will not be able to provide the needed programmatic expansions such as additional drop-off solid waste collection sites, facilities needs and purchase new equipment and will not be adequately able to meet solid waste management needs over the next 5 years without raising property taxes and/or collection fees. Property tax increases to fund the solid waste program or raising tipping fees, will not be met with favorable response among residents or elected officials. Therefore the most likely source of funding to move the system forward the next 5 years is grant funding.

Johnson County, Tennessee
Solid Waste/Sanitation Fund
Statement of Proposed Operations
For the Fiscal Year Ending June 30, 2015

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Account No.	Description	Actual 2012 - 2013	Estimated 2013 - 2014	Estimated 2014 - 2015
	<u>Estimated Revenues</u>			
40000	<u>LOCAL TAXES</u>			
40100	<u>County Property Taxes</u>			
40110	Current Property Tax	\$ 82,923	\$ 87,613	\$ 85,048
40120	Trustee's Collections - Prior Year	9,956	5,204	5,000
40130	Circuit/Clerk & Master Collections - Prior Years	2,618	1,840	1,000
40140	Interest and Penalty	1,090	897	1,000
40150	Pick-up Taxes	0	0	78
40300	<u>Statutory Local Taxes</u>			
40320	Bank Excise Tax	644	453	500
	TOTAL LOCAL TAXES	\$ 97,231	\$ 96,007	\$ 92,626
43000	<u>CHARGES FOR CURRENT SERVICES</u>			
43100	<u>General Service Charges</u>			
43110	Tipping Fees	\$ 417,075	\$ 457,966	\$ 430,000
43300	<u>Fees</u>			
43380	Vending Machine Collections	66	0	0
	TOTAL CHARGES FOR CURRENT SERVICES	\$ 417,141	\$ 457,966	\$ 430,000
44000	<u>OTHER LOCAL REVENUES</u>			
44100	<u>Recurring Items</u>			
44130	Sale of Materials and Supplies	\$ 5,451	\$ 6,294	\$ 7,000
44170	Miscellaneous Refunds	720	440	0
	TOTAL OTHER LOCAL REVENUES	\$ 6,171	\$ 6,734	\$ 7,000
	Total Estimated Revenues	\$ 520,543	\$ 560,707	\$ 529,626
	Estimated Other Sources:			
49700	Insurance Recovery	\$ 0	\$ 19,149	\$ 0
	Total Estimated Revenues and Other Sources	\$ 520,543	\$ 579,856	\$ 529,626
	<u>Estimated Expenditures</u>			
55000	<u>PUBLIC HEALTH AND WELFARE</u>			
55710	<u>Sanitation Management</u>			
143	Equipment Operators	\$ 64,652	\$ 60,996	\$ 62,826
189	Other Salaries & Wages	0	6,170	9,518
201	Social Security	3,907	4,072	4,486
204	State Retirement	7,358	7,177	8,971
206	Life Insurance	0	53	54
207	Medical Insurance	5,872	6,098	6,623
210	Unemployment Compensation	288	409	432
212	Employer Medicare	914	952	1,049
299	Other Fringe Benefits	0	98	180
307	Communication	1,453	1,630	1,500
317	Data Processing Services	1,828	1,910	2,000
330	Operating Lease Payments	0	0	1,054
336	Maintenance & Repair Services- Equipment	4,792	5,772	6,000
349	Printing, Stationery and Forms	242	0	500

Johnson County, Tennessee
Solid Waste/Sanitation Fund
Statement of Proposed Operations (Cont.)

D-2

Account No.	Description	Actual 2012 - 2013	Estimated 2013 - 2014	Estimated 2014 - 2015
	<u>Estimated Expenditures (Cont.)</u>			
55000	<u>PUBLIC HEALTH AND WELFARE (Cont.)</u>			
55710	<u>Sanitation Management (Cont.)</u>			
399	Other Contracted Services	\$ 330,189	\$ 372,485	\$ 375,000
410	Custodial Supplies	803	570	1,500
412	Diesel Fuel	4,415	5,740	5,500
415	Electricity	5,369	5,789	6,000
425	Gasoline	20,553	4,063	4,000
435	Office Supplies	456	70	800
451	Uniforms	2,951	3,344	3,400
454	Water and Sewer	869	1,191	1,200
499	Other Supplies and Materials	0	259	300
506	Liability Insurance	7,270	7,899	7,506
510	Trustee's Commission	6,060	6,368	6,500
513	Worker's Compensation Insurance	7,617	9,265	5,629
599	Other Charges	23,097	8,736	4,598
707	Building Improvements	0	14,436	0
709	Data Processing Equipment	0	0	1,500
719	Office Equipment	1,037	1,196	0
724	Site Development	1,000	3,641	1,000
	Total Sanitation Management	\$ 502,992	\$ 540,389	\$ 529,626
	Total Estimated Expenditures	\$ 502,992	\$ 540,389	\$ 529,626
	Excess of Estimated Revenues and Other Sources Over (Under) Estimated Expenditures	\$ 17,551	\$ 39,467	\$ 0
	Estimated Beginning Fund Balance, July 1	(410)	17,141	56,608
	Estimated Ending Fund Balance, June 30	\$ 17,141	\$ 56,608	\$ 56,608

Item 11-Sustainable Goals Consistent with the State Plan

Discuss the region's plan for managing its solid waste system over the next five (5) years. Identify any deficiencies in that plan and offer recommendations for eliminating these deficiencies. Suggest and list the specific ways in which the region can improve its solid waste program to reach a level of waste reduction above that of the goal and provide long term sustainability to the current solid waste collection system. Show how the region's plan supports the statewide Solid Waste Management Plan.

Without additional funding, Johnson County's plans for managing the solid waste management system over the next 5 years will likely remain very similar to the current operations. However, it is the opinion of the author that Johnson County could make some improvements to the current system that will enhance services for residents.

First, the County needs to improve its effort to increase participation in the business and industry waste reduction/recycling reporting program. Local staff need s to work more closely with major businesses and industries in the Region to further expand the voluntary reporting program. This program is extremely important to the Region in their efforts to attain the 25% waste reduction goal using the "real time" calculation method. Secondly, the Town of Mountain City should begin some level of recycling service for town residents or at the least, support the efforts of Johnson County to provide recycling services in the Town. Next, an e-waste recycling program and paint diversion program should be implemented within the next 5 years to collect and eliminate electronics and paint from the Class I waste stream. Not only will this increase recycling and diversion efforts, it will allow the County to host a HHW Collection event. Next, Johnson County should consider at least one additional drop-off solid waste and recycling collection site in the County to better serve residents in the more remote areas of the County. Finally, Johnson County needs to employ a full or part time Solid Waste Director whose sole responsibility is to promote waste reduction, recycling and management of the solid waste system. We believe the Region's Plan has long supported the statewide Solid Waste Management Plan. With the recent adoption of the Statewide 2025 Materials Management Plan, Johnson County and other counties will need to assess current operations and determine if any changes or additions need to be made to support the new statewide plan.

Johnson County continues to struggle to provide enhanced solid waste management services while balancing the lack of funding to provide these types of services. The improvements identified by the author in this report, are not intended to reflect negatively on Johnson County but to identify needs that could be met if additional funding can be identified. Long-term sustainability of the solid waste collection system is not in question. County officials have long exhibited a commitment to providing a system in a way that provides residents with an adequate solid waste management program that meets the needs of residents.

Sources:

U.S. Census Bureau
ETSU Department of Economics and Finance
Tennessee Department of Labor
First Tennessee Development District staff
2008 Johnson County Solid Waste District Needs Assessment Update
2014 Johnson County Annual Solid Waste Progress Report
Johnson County Solid Waste Program Staff